

AMENDMENTS TO THE CLAIMS

Please cancel claims 19 and 20, and amend claims 1 and 22, as follows:

Claim 1 (Currently Amended) An abrasive pad comprising:

an abrasive substrate having a polishing surface; and

a light transmitting member,

wherein each of the abrasive substrate and the light transmitting member comprise a water-insoluble matrix material and a water-soluble substance dispersed in the water-insoluble matrix material,

wherein each of the water-insoluble matrix material of the abrasive substrate and the light transmitting member comprise a same polymer, and

wherein the light transmitting member ~~is fused to~~ and the abrasive substrate are fused and bonded together by melting the bonding surfaces of both of the light transmitting member and the abrasive substrate.

Claim 2 (Original) The abrasive pad of claim 1, wherein at least part of the water-insoluble matrix material is a crosslinked polymer.

Claim 3 (Original) The abrasive pad of claim 2, wherein the crosslinked polymer is crosslinked 1,2-polybutadiene.

Claim 4 (Original) The abrasive pad of claim 1, wherein the light transmitting member is made thin in a direction perpendicular to the polishing surface of the abrasive substrate.

Claim 5 (Original) The abrasive pad of claim 1, wherein the materials of the light transmitting material and the abrasive substrate differ from each other in type and/or ratio.

Claim 6 (Original) The abrasive pad of claim 1 which has a fixing layer for fixing the abrasive pad on a polishing machine, which is formed on the rear surface opposite to the polishing surface of the abrasive pad.

Claim 7 (Withdrawn) A method of manufacturing the abrasive pad of claim 1, comprising holding a previously formed light transmitting member for an abrasive pad at a predetermined position in the cavity of a metal mold for insert molding and injecting the material of an abrasive substrate into the remaining space in the cavity to fuse the light transmitting member to the abrasive substrate.

Claim 8 (Withdrawn) A method of manufacturing the polishing pad of claim 1, comprising holding a previously formed abrasive substrate having a hole for accepting a light transmitting member in the cavity of a metal mold for insert molding and injecting the material of the light transmitting member into the hole for accepting the light transmitting member to fuse the abrasive substrate to the light transmitting member.

Claim 9 (Cancelled).

Claim 10 (Original) An abrasive laminated pad comprising the abrasive pad of claim 1 and a base layer having light transmission properties formed on the rear surface opposite to the polishing surface of the abrasive pad.

Claim 11 (Original) An abrasive laminated pad comprising the abrasive pad of claim 1, a base layer formed on the rear surface opposite to the polishing surface of the abrasive pad, and a fixing layer for fixing the pad on a polishing machine, formed on the side opposite to the abrasive pad of the base layer.

Claim 12 (Original) A method of polishing a semiconductor wafer with an abrasive pad, characterized in that the abrasive pad of claim 1 or the abrasive laminated pad of claim 10 or 11 is used, and the polishing end point of the semiconductor wafer is detected by an optical end-point detection device through the light transmitting member of the abrasive pad or the abrasive laminated pad.

Claim 13 (Previously Presented) The abrasive pad of claim 1, wherein the water-insoluble matrix material is selected from the group consisting of a thermoplastic resin, a thermosetting resin, an elastomer, rubber, and combinations thereof.

Claim 14 (Previously Presented) The abrasive pad of claim 1, wherein the water-soluble substance comprises solid particles having an average particle diameter ranging from 0.1 to 500 μm .

Claim 15 (Previously Presented) The abrasive pad of claim 1, wherein the water-soluble substance is an organic substance selected from the group consisting of dextrin, cyclodextrin, mannitol, saccharides, celluloses, starch, protein, polyvinyl alcohol, polyvinyl pyrrolidone, polyvinylsulfonic acid, polyacrylic acid, polyethylene oxide, a water-soluble photosensitive resin, sulfonated polyisoprene, and combinations thereof.

Claim 16 (Previously Presented) The abrasive pad of claim 1, wherein the water-soluble substance is an inorganic substance selected from the group consisting of potassium acetate, potassium nitrate, potassium carbonate, potassium hydrogencarbonate, potassium bromide, potassium phosphate, potassium sulfate, magnesium sulfate, calcium nitrate, and combinations thereof.

Claim 17 (Previously Presented) The abrasive pad of claim 1, wherein the light transmitting member has a thickness ranging from 0.1 to 4 mm.

Claim 18 (Previously Presented) The abrasive pad of claim 1, wherein the light transmitting member has a transmittance at a wavelength ranging from 100 to 3,000 nm of 0.1% or more or an integrated transmittance at a wavelength ranging from 100 to 3,000 nm of 0.1% or more, when the thickness of the light transmitting member is 2 mm.

Claim 19 (Cancelled).

Claim 20 (Cancelled).

Claim 21 (Previously Presented) The abrasive pad of claim 1, wherein the same polymer is 1,2-polybutadiene.

Claim 22 (Withdrawn-Currently Amended) An abrasive pad comprising:
an abrasive substrate having a polishing surface and consisting of a water-insoluble matrix material; and

a light transmitting member comprising a water-insoluble matrix material and a water-soluble substance dispersed in the water-insoluble matrix material,

wherein the water-insoluble matrix material of the abrasive substrate and the light transmitting member comprise a same polymer, and

wherein the light transmitting member ~~is fused to~~ and the abrasive substrate are fused and bonded together by melting the bonding surfaces of both of the light transmitting member and the abrasive substrate.

Claim 23 (Withdrawn) The abrasive pad of claim 22, wherein the same polymer is 1,2-polybutadiene.